UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,990	12/05/2001	Sanjay Kamath	000461	6494

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EXAMINER
SWEARINGEN, JEFFREY R

ART UNIT	PAPER NUMBER
2145	

DATE MAILED: 02/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/010,990	KAMATH ET AL.
	Examiner	Art Unit	
	Jeffrey R. Swearingen	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>02 December 2005</u>.

2a) ☒ This action is **FINAL.** 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>*1,3-10,12-18,25-30 and 32-37*</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>*1,3-10,12-18,25-30 and 32-37*</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   The rejection under 35 U.S.C. 101 is withdrawn.

2.   The rejection under 35 U.S.C. 112, first paragraph for enablement is withdrawn. Applicant's

arguments are persuasive. On page 9 of the specification, paragraph 1023, Applicant clearly stated that

flow control module 120 monitors the window size of buffer 118, **which is the amount of unoccupied**

space available at buffer 118 for receiving more data from BSC 122. Based upon this statement, the

determination of the window size is enabled.

3.   Applicant's further arguments are directed toward the amended claims, which have been treated

with new art due to amendment.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for

the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public
> use or on sale in this country, more than one year prior to the date of application for patent in the United
> States.

5.   Claims 1, 4-8, 10, 13-17, 25, 27-28, 30 and 33-36 are rejected under 35 U.S.C. 102(b) as being

anticipated by Jain (U.S. Patent No. 5,193,151).

6.   In regard to claims 1, 10 and 30, Jain disclosed *incrementing a flow indication counter indicating*

an updated number of data packets transmitted from a buffer in a base transceiver station; when said

updated number of data packets transmitted from said buffer is equal to or greater than a threshold

number, determining a window size of said buffer available to store data packets; generating a flow

indication message, said flow indication message indicating said window size; and transmitting said flow

indication message to a base station controller. Jain operated over both wire links and satellite links

(*base transceiver station* and *base station controller*). Column 3, lines 26-29. Jain monitored the size of

buffers to determine the window size. Column 3, lines 40-57. Column 4, lines 47-60. Column 5, line 41

– column 6, line 2. Column 6, lines 13-27. Column 8, line 65 – column 9, line 20.

7.   In regard to claims 4, 13, 25 and 33, Jain was disclosed as in claim 1. Jain further disclosed

determining a packet ID of a data packet received by said buffer before said generating step. The packet

header in column 18, lines 47-68 disclosed the packet ID.

8.   In regard to claims 5, 14, 27 and 34, Jain further disclosed *said packet ID is a last packet ID.* The

packet header in column 18, lines 47-68 disclosed "what type of message is being transmitted." Line 51.

9.   In regard to claims 6, 15 and 35, Jain further disclosed *said flow indication message further*

comprises said packet ID. An acknowledgement packet is of the same format as the packet...the type

field of an acknowledgement packet may have a certain code... Column 18, lines 63-68.

10.   In regard to claims 7 and 16, Jain further disclosed *transmitting said flow indication message.*

Column 8, lines 1-5.

11.   In regard to claims 8, 17, 28 and 36, Jain further disclosed *keeping track of an elapsed time since*

the transmission of a last message; and *generating said flow indication message when said elapsed time*

is equal to or greater than a threshold time interval. The algorithm in column 5, lines 41-68 which was

used to calculate an updated window size used the delay of packets as a factor.

Claim Rejections - 35 USC § 103

12.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

13.   Claims 3, 9, 12, 18, 26, 29, 32, and 37 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Jain.

14.   In regard to claims 3, 12, 26 and 32, Jain disclosed keeping track of the number of packets in the

system to determine the window size. Jain failed to disclose a specific threshold of fifty. Jain did disclose

limiting parameters in column 4, lines 1-5. Therefore, it would have been obvious to one of ordinary skill

in the art at the time of the invention to adjust multiple "network tuning parameters" in Jain such as a

threshold of fifty to "optimize network performance."

15.   In regard to claims 9, 18, 29 and 37, Jain disclosed monitoring the delay in the system in column

9, lines 43-60. Jain failed to explicitly disclose a delay parameter of 0.5 seconds, but allowed for flexibility

in delay times in column 9, lines 55-57 and column 4, lines 1-5. Therefore it would have been obvious to

one of ordinary skill in the art at the time of the invention to use any delay parameter in the system,

including 0.5 seconds, to "optimize network performance". Column 4, lines 1-5.

Conclusion

16.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

17.   Karandikar, Shrikrishna et al. "TCP Rate Control". ACM SIGCOMM Computer Communication

Review. Volume 30, Issue 1. January 2000. pp. 45-58. ACM Press.

18.   Moorman, Jay et al. "Real-time Prioritized Call Admission Control in a Base Station Scheduler."

Proceedings of the 3rd ACM International Workshop on Wireless Mobile Multimedia. 2000. ACM Press.

pp. 28-37.

19.   Mo, Jeonghoon et al. "Fair End-to-end Window-based Congestion Control". IEEE/ACM

Transactions on Networking. October 2000. Volume 8, Issue 5. pp. 556-567.

20.   Yano, Koichi et al. "A Window-based Congestion Control for Reliable Multicast Based on TCP

Dynamics." Proceedings of the eighth ACM International Conference on Multimedia. ACM Press. 2000.

pp. 249-258.

21.   Aweya, James et al. "Improving Network Service Quality with Explicit TCP Window Control."

International Journal of Network Management. May 2001. Volume 11, Issue 3. pp. 169-188.

22.   Kunniyur, Srisankar et al. "Analysis and Design of an Adaptive Virtual Queue Algorithm for Active

Queue Management." Proceedings of the 2001 Conference on Applications, Technologies,

Architectures, and Protocols for Computer Communications. 2001. ACM Press. pp. 123-134.

23.   Dyer, Thomas et al. "A Comparison of TCP Performance Over Three Routing Protocols for Mobile Ad Hoc Networks." Proceedings of the 2nd ACM International Symposium on Mobile Ad Hoc Networking & Computing. 2001. pp. 56-66.

24.	Baugher et al.	U.S. Patent No. 5,581,703
25.	Mahany	U.S. Patent No. 5,696,903
26.	Baugher et al.	U.S. Patent No. 5,701,465
27.	Gray	U.S. Patent No. 5,862,337
28.	Ramanathan et al.	U.S. Patent No. 5,913,041
29.	Cudak et al.	U.S. Patent No. 6,058,106
30.	Ghanwani et al.	U.S. Patent No. 6,075,769
31.	Ramanathan et al.	U.S. Patent No. 6,076,113

32.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. Swearingen whose telephone number is (571) 272-3921. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Jason Cardone can be reached on 571-272-3933. The fax phone number for the organization where this

application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application

Information Retrieval (PAIR) system. Status information for published applications may be obtained from

either Private PAIR or Public PAIR. Status information for unpublished applications is available through

Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC)

at 866-217-9197 (toll-free).

Jason Cardone
Supervisory Patent Examiner
Art Unit 2145